SUBJECT INDEX.

Address.

Annual — by the President, Richard L. Humphrey, 22.

Advertisements.

List of —, 417.

Aggregates.

Exposed Selected — in Monolithic Concrete Construction. Albert Moyer, 248.

Architects.

Concrete from the — Point of View. E. B. Green, 242.

Architecture.

Report of the Committee on Art and —. Charles D. Watson, Chairman, 240.

Art.

Report of the Committee on — and Architecture. Charles D. Watson, Chairman, 240.

Blocks.

Progress in Manufacture and Use of Cement Building —. J. W. Pierson, 194.

Standard Specifications for Cement Hollow Building —, 185.

Topical Discussion on the Manufacture of Hollow Cement —, 196.

Building Blocks.

See **Blocks.**

Cement (see also **Concrete**).

General Discussion on the Use of —, 211.

Progress in the Investigation of — Mortars and Concretes in the Structural Materials Testing Laboratories of the United States Geological Survey, St. Louis, Mo. Richard L. Humphrey, 334.

Progress in Manufacture and Use of — Building Blocks. J. W. Pierson, 194.

Proportioning and Mixing — Mortars and Concrete. Leonard C. Wason, 129. Discussion, 139.

Report of Committee on Testing — and — Products. E. S. Larned, Chairman, 178.

Report of the Committee on Machinery for — Users. M. Wetzstein, Chairman, 224.

Specifications for — Sidewalks. C. W. Boynton, 145.

Standard Specifications for Portland — Sidewalks, 172.

Standard Specifications for — Hollow Building Blocks, 185.

Topical Discussion on the Manufacture of Hollow — Blocks, 196.

Waterproofing — Structures. James L. Davis, 323.

Committee Reports.

Report of the Committee on Streets, Sidewalks and Floors. George L. Stanley, Chairman, 157. Discussion, 162.

Report of the Committee on Testing Cement and Cement Products. E. S. Larned, Chairman, 178.

Report of the Committee on Machinery for Cement Users. M. Wetzstein, Chairman, 224.

Report of the Committee on Fireproofing and Insurance. William M. Bailey, Chairman, 229.

Report of the Committee on Laws and Ordinances. H. C. Henley, Chairman, 233.

Report of the Committee on Art and Architecture. Charles D. Watson, Chairman, 240.

Concrete (see also **Cement** and **Reinforced Concrete**).

— from the Architect's Point of View. E. B. Green, 242.

Exposed Selected Aggregates in Monolithic — Construction. Albert Moyer, 248.

Factory-Made —. Charles D. Watson, 97.

Manipulation of Forms in — Construction. J. F. Swinnerton, 303.

Progress in the Investigation of Cement Mortars and — in the Structural Materials Testing Laboratories of the United States Geological Survey, St. Louis, Mo. Richard L. Humphrey, 334.

Proportioning and Mixing Cement Mortars and —. Leonard C. Wason, 129. Discussion, 139.

The Necessity of Continuity in the Steel Reinforcement of — Structures. E. P. Goodrich, 74. Discussion, 83.

The Value of Sand in — Construction. E. S. Larned, 205.

Continuity.

The Necessity of — in the Steel Reinforcement of Concrete Structure. E. P. Goodrich, 74. Discussion, 83.

Convention.

Summary of Proceedings of the Fourth —, 11.

Register of Those in Attendance, Fourth —, 351.

List of Exhibitors, Fourth —, 362.

Co-operation.

— What It Is and What It Can Accomplish. Robert W. Lesley, 115.

Costs.

Methods and — of Reinforced Concrete Construction with Separately Molded Members. William H. Mason, 48. Discussion, 72.

Discussion.

Topical — on the Manufacture of Hollow Cement Blocks, 196.

General — on the Use of Cement, 211.

Executive Board.

Report of the —, 370.

Minutes of the Meetings of the —, 373.

Exhibitors.
List of —, Fourth Convention, 362.

Factory.
— Made Concrete. Charles D. Watson, 97.

Fireproofing.
Report of the Committee on — and Insurance. William M. Bailey, Chairman, 229.

Floors.
Report of the Committee on Streets, Sidewalks and —. George L. Stanley, Chairman, 157. Discussion, 162.
Tests of Reinforced Concrete Hollow Tile — Spans. W. K. Hatt, 28. Discussion, 46.

Forms.
Manipulation of — in Concrete Construction. J. F. Swinnerton, 303.
Metal — in Reinforced Concrete Construction. W. L. Caldwell, 286. Discussion, 292.

Hollow Blocks.
See **Blocks.**

Hollow Tile.
Tests of Reinforced Concrete — Floor Spans. W. K. Hatt. 28. Discussion, 46.

Insurance.
Report of the Committee on Fireproofing and —. William M. Bailey, Chairman, 229.

Investigation.
Progress in the — of Cement Mortars and Concretes in the Structural Materials Testing Laboratories of the United States Geological Survey, St. Louis, Mo. Richard L. Humphrey, 334.

Laws.
Report of the Committee on — and Ordinances. H. C. Henley, Chairman, 233.

Loose Bar System.
The Unit vs. the — of Reinforced Concrete Construction. Emile G. Perrot, 85. Discussion, 95.

Machinery.
Report of the Committee on — for Cement Users. M. Wetzstein, Chairman, 224.

Members.
List of —, 391.

Metal Forms.
See **Forms.**

Methods.
— and Costs of Reinforced Concrete Construction with Separately Molded Members. William H. Mason, 48. Discussion, 72.

Minutes.
— of the Meetings of the Executive Board, 373.

Mixing.
Proportioning and — Cement Mortars and Concrete. Leonard C. Wason, 129. Discussion, 139.

Monolithic.
Exposed Selected Aggregates in — Concrete Construction. Albert Moyer, 248.

National Association of Cement Users.
Charter, 6.
By-Laws, 7.
List of Officers, 5.
List of Sectional Vice-Presidents and Members, 5.
List of Advertisements, 417.
List of Exhibitors, Fourth Convention, 362.
List of Members, 380.
Minutes of the Meetings of the Executive Board, 373.
Register of Those in Attendance, Fourth Convention, 351.
Report of the Executive Board, 370.

Natural Cement.
See **Cement.**

Ordinances.
Report of the Committee on Laws and —. H. C. Henley, Chairman, 233.

Portland Cement.
See **Cement.**

President's Address.
See **Address.**

Proceedings.
Summary of — of the Fourth Convention, 11.

Proportioning.
— and Mixing Cement, Mortars and Concrete. Leonard C. Wason, 129. Discussion, 139.

Reclamation.
— of Arid Land. E. T. Perkins, 309.

Reinforced Concrete (see also **Concrete**).
— from the Contractor's Point of View. H. H. Fox, 262. Discussion, 280.
Metal Forms in — Construction. W. L. Caldwell, 286. Discussion, 292.

Reinforced Concrete (Continued).
Methods and Costs of — Construction with Separately Molded Members. William H. Mason, 48. Discussion, 72.
Tests of — Hollow Tile Floor Spans. W. K. Hatt, 28. Discussion, 46.
The Unit vs. The Loose Bar System of — Construction. Emile G. Perrot, 85. Discussion, 95.

Reinforcement.
The Necessity of Continuity in the Steel — of Concrete Structures. E. P. Goodrich, 74. Discussion, 83.

Sand.
The Value of — in Concrete Construction. E. S. Larned, 205.

Separately Molded.
Methods and Costs of Reinforced Concrete Construction with — Members. William H. Mason, 48. Discussion, 72.

Sidewalks.
Report of the Committee on Streets — and Floors. George L. Chairman, 157. Discussion, 162.
Specifications for Cement —. C. W. Boynton, 145.
Standard Specifications for Portland Cement —, 172.

Specifications (see also **Standard Specifications**).
— for Cement Sidewalks. C. W. Boyton, 145.

Standard Specifications.
— for Portland Cement Sidewalks, 172.
— for Cement Hollow Building Blocks, 185.

Steel.
The Necessity of Continuity in the — Reinforcement of Concrete Structures. E. P. Goodrich, 74. Discussion, 83.

Streets.
Report of the Committee on — Sidewalks and Floors. George L. Stanley, Chairman, 157. Discussion, 162.

Structural Materials Testing Laboratories.
Progress in the Investigation of Cement Mortars and Concrete in the — of the United States Geological Survey, St. Louis, Mo. Richard L. Humphrey, 334.

Summary.
— of Proceedings of the Fourth Convention, 11.

Tests.
— of Reinforced Concrete Hollow Tile Floor Spans. W. K. Hatt, 28. Discussion, 46.
Report of the Committee on — of Cement and Cement Products. E. S. Larned, Chairman, 178.

Unit System.
The — vs. The Loose Bar System of Reinforced Concrete Construction. Emile G. Perrot, 85. Discussion, 95.

United States Geological Survey.

Progress in the Investigation of Cement Mortars and Concrete in the Structural Materials Testing Laboratories of the —, St. Louis, Mo. Richard L. Humphrey, 334.

Use.

Progress in Manufacture and — of Cement Building Blocks. J. W. Pierson, 194.

General Discussion on the — of Cement, 211.

Value.

The — of Sand in Concrete Construction. E. S. Larned, 205.

Waterproofing.

— Cement Structures. James L. Davis, 323.

AUTHOR INDEX.

Bailey, William M.
Report of the Committee on Fireproofing and Insurance, 229.

Ballinger, W. F.
Discussion, 281, 285, 292.

Beyer, Ira.
Discussion, 211.

Boyer, Edward D.
Discussion, 165, 170.

Boynton, C. W.
Specifications for Cement Sidewalks, 145.

Brown, Charles C.
Discussion, 211.

Cadogan, A. W.
Discussion, 140, 141.

Caldwell, W. L.
Metal Forms in Reinforced Concrete Construction, 286.
Discussion, 96, 292, 293, 294, 297, 301.

Case, E. J.
Discussion, 46.

Chandler, Dana G.
Discussion, 162, 166, 211, 212.

Click, D. M.
Discussion, 170.

Cochran, Benjamin.
Discussion, 196, 197, 201, 202.

Comoli, P. P.
Discussion, 222, 283, 298.

Conger, George D.
Discussion, 72.

Conk, William.
Discussion, 165, 166.

Daniels, M. S.
Discussion, 72, 143, 218.

Davis, James L.
Waterproofing Concrete Structures, 323.

Dietrich, L. A.
Discussion, 169.

Dunn, W. H.
Discussion, 168, 199, 201, 214.

Emerson, Frank L.
Discussion, 300, 302.

Fox, H. H.
Reinforced Concrete from the Contractor's Point of View, 262.
Discussion, 95, 280, 281, 282, 284, 299.

Franklin, Lester R.
Discussion, 168.

Gill, J. Robert.
Discussion, 197, 198, 199.

Goodrich, E. P.
The Necessity of Continuity in the Steel Reinforcement of Concrete Structures, 74.
Discussion, 83, 84, 95, 143, 196, 197, 200, 201, 216, 217, 218, 220, 283, 285, 293, 294, 295.

Green, E. B.
Concrete from the Architect's Point of View, 242.

Ham, William H.
Discussion, 83, 96, 280, 285, 301.

Haswin, Carl A.
Discussion, 197, 201, 203.

Hatt, W. K.
Tests of Reinforced Concrete Hollow Tile Spans, 28.
Discussion, 46, 47, 83, 84.

Henley, H. C.
Report of the Committee on Laws and Ordinances, 233.

Humphrey, Richard L.
Progress in the Investigation of Cement Mortars and Concretes in the Structural Materials Laboratories of the United States Geological Survey, St. Louis, Mo., 334.
Report of Executive Board, 370.
The Year's Progress in the Cement Industry and the Work of the Association, 22.
Discussion, 140, 142, 163, 164, 196, 197, 198, 199, 211, 212, 213, 214, 217, 218.

Irvine, Fred. K.
Discussion, 282.

Keith, Frank S.
Discussion, 72, 73.

Larned, E. S.
Report of the Committee on Testing Cement and Cement Products, 178.
The Value of Sand in Concrete Construction, 205.
Discussion, 46, 47, 280, 282, 283, 294, 298, 299, 301.

Lesley, Robert W.
Co-Operation—What It Is and What It Can Accomplish, 115.
Discussion, 200.

Mason, William H.
Methods and Costs of Reinforced Concrete Construction with Separately Molded Members, 48.
Discussion, 72, 73.

Maynard, Arthur J.
Discussion, 215.

McVay, C. B.
Discussion, 167.

Moyer, Albert.
Exposed Selected Aggregates in Monolithic Concrete Construction, 248.

Payne, James E.
Discussion, 218.

Perkins, E. T.
Reclamation of Arid Land, 309.

Perrot, Emile G.
The Unit vs. The Loose Bar System of Reinforced Concrete Construction, 85.
Discussion, 96, 140, 281, 283, 284, 293, 297, 300.

Phelan, F. J.
Discussion, 202.

Phipps, M.
Discussion, 212, 301, 302.

Pierson, J. W.
Progress in Manufacture and Use of Cement Building Blocks, 194.

Robinson, C. W.
Discussion, 139.

Schouler, W. W.
Discussion, 139, 162, 164, 166, 169, 170, 214, 215, 217, 220, 221, 222, 223.

Sibley, L. P.
Discussion, 218, 220.

Skinner, Theodore H.
Discussion, 73, 167, 213, 216, 217.

Stanley, George L.
Report of the Committee on Streets, Sidewalks and Floors, 157.
Discussion, 163, 164, 166.

Stockton, W. H.
Discussion, 203.

Swinnerton, J. F.
Manipulation of Forms in Concrete Construction, 303.

Wason, Leonard C.
Proportioning and Mixing Cement Mortars and Concrete, 129.
Discussion, 139, 141, 143, 283, 295.

Watson, Charles D.
Factory-Made Concrete, 97.
Report of the Committee on Art and Architecture, 240.
Discussion, 84, 143, 280.

Welch, C. J.
Discussion, 212, 221, 222.

Wetzstein, M.
Report of the Committee on Machinery for Cement Users, 224.

Wiselogel, W. F.
Discussion, 162.

Wood, R. M.
Discussion, 215.

Wyatt, F. E.
Discussion, 203.